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EDITORIAL AND PUBLICATION OFFICE
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BOB-WHITES (QUAIL)

"As the weather warmed and the rains came the Bob-whites moved to the grassy hills to be dry. On these hills the birds tended to spread out, were difficult to put up, and dashed in small groups of singles, pairs, and flocks." (From a drawing by Sidney H. Horn for Iowa State College).

THE 1940 BOB-WHITE SEASON IN SOUTHEAST IOWA

By ROBERT MOORMAN and GEORGE O. HENDRICKSON¹

The open season on the Bob-white (*Colinus v. virginianus*), November 15-December 15, 1940, was less satisfactory in general than the very successful season, 1939. As many hunters and bird students have asked for a report on the 1940 period, this article has been prepared to open with a discussion of the autumn weather based on data supplied by Reed (1940) who summarized November as cold and wet with more than the usual amount of snow, and December as relatively warm and wet.

The mean temperature for November in the Bob-white region was about 2° F. below normal and the precipitation about .3 inch above normal, falling generally in the region on 11 days and at least in traces in scattered localities on 12 additional days. The lowest temperature of the month, -4 degrees F., was recorded November 15 at the close of a 4-day cold spell. The first 10 days of November and the last 16 were much milder. December opened with a 3-day zero period, the only cold spell of the month.

November 11 brought a blizzard with a 30-mile northwest wind and 2 inches of snow, varying from a trace to 3.8 inches in the 22 counties of the Bob-white region. Observations at the Decatur-Wayne County Experimental Bob-white Management Area show that the storm prompted considerable movement of the coveys of Bob-whites. Driven by the wind and snow the quail, in light protective cover and tilled hillsides, moved to denser herbaceous stands and larger wooded tracts chiefly of the lower land. On the first day of hunting, the majority of the birds were headquartering and holding fast in dense cover sheltered from the wind. They fed in nearby weed patches, and fields of corn and sorghum.

Previous to the hunting season, on the basis of sample counts on smaller tracts of the area, 1,549 Bob-whites were estimated on the area of 7,713 acres. In the summer and fall 41 different broods were accurately counted and shown to contain an approximate average of 10 young. To a spring seedstock of 389 Bob-whites, of which 60 percent presumably reared an average of 10 young to a pair of adults, about 1,160 young were added during the summer. That represents an increase of 298 percent during the season, which is less than a 456 percent increase the year before (Sanders, 1940) when a fall population of 2,266 Bob-whites was attained. Older farmers who spoke of the 1939 number as the highest they had seen for many years, were of the general opinion that the 1940 population was less than that of 1939. Quail estimates by farmers in 1939 tended to be higher than those of the writers, while in 1940 the converse was true. Perhaps the heavy population of 1939 encouraged too optimistic reports from farmers, and the noticeably fewer birds depressed their reports the following year.

During the 31 days of the 1940 season 20 hunting parties on the 7,713-acre Decatur-Wayne County area harvested 60 quail, slightly less than 4 percent of the fall numbers. Two quail were in the average bag of a hunter in 14 successful parties averaging 2.2 hunters a party. Six parties failed to get any quail.

By the time the open quail season was half over some alarm had arisen about the condition of the quail population in southern Iowa.

¹Journal Paper No. J-607 of the Iowa Agricultural Experiment Station, Ames, Iowa, Project No. 494. The U. S. Fish and Wildlife Service (Department of the Interior), Iowa State College, Iowa State Conservation Commission, and American Wildlife Institute cooperating.

Many hunters reported difficulty in finding quail coveys, and coveys known to have been on farms previous to the legal hunting season could not be located after the opening date in mid-November. Quail hunters endeavored to explain their failure to find birds by placing the blame or loss on predation or disease. Such hunter discussion was undoubtedly a factor in reducing the number of hunters taking the field during the rest of the open season.

As no dead quail was found by daily field checks on the Decatur-Wayne County area during the fall, when the senior writer resided there and was in the field daily, there was little probability of loss from any disease such as tularemia. No dead cottontail (*Sylvilagus floridanus mearnsii*) with tularemia was found on the area after the previous May. Cottontails, although scarce on the area in autumn, were apparently in good health. Short-eared Owls (*Asio f. flammeus*) were numerous in November and were suspected by some hunters, without direct evidence, to harm Bob-whites.

An effort to answer the question of the missing coveys of quail was made on the Wayne-Decatur County area during mid-December. The hunters' complaint of a covey scarcity rather than a scarcity of birds in the coveys suggested that the trouble involved a movement of birds rather than an actual decrease in numbers. As previously stated, a total of 41 different coveys of quail had been found during the summer and autumn. Because many of these coveys were flushed during the hunting season, such coveys were counted as present for that period. All coveys not observed during the hunting season were searched for after the quail season closed. The final tabulation revealed 37 coveys as present and 4 coveys missing. Since 90 per cent of the quail coveys on the closely observed portions of the area were thus known to have been present during the open season there could scarcely have been any startling pre-seasonal decrease in the number of coveys of quail.

The first major cause of unexpectedly poor hunting success in the 1940 quail season on the area is believed to have been the result of the storm on November 11. The storm drove the quail into more sheltered quarters where the birds limited their activities to smaller areas and consequently were difficult to find early in the open season. Further, safe in the dense cover, the quail were not easily driven into the open to flush as entire coveys for good shooting. Rather, they held fast, flushed around the hunters, got up as singles or a few at a time, and generally behaved in ways discouraging to the dogs and the hunters. Such hunting is time-consuming, but not productive of good bags.

Later, as the weather warmed and rains came the Bob-whites moved to the grassy hills to be dry. On these hills the birds tended to spread out, were difficult to put up, and flushed in small groups of singles, pairs and trios. The dogs found the going hard, tired quickly, and flushed but few birds as they ranged over large areas. Frequently one heard the small groups of Bob-whites calling to others across the fields, but they were found with difficulty and often not scented by good dogs. Such hunting, also time-consuming, netted few birds.

Another factor which certainly influenced hunting success was that in 1940 the quail were only about 75 percent as numerous as in 1939, according to the population estimates for the two years on the Decatur-Wayne County area. Hunters naturally compared the 1940 crop of quail to the "bumper" crop of the previous season when the quail population was probably near the peak of recent years for southern Iowa.

The experiences encountered on the Decatur-Wayne County area were typical of the hunting season in other parts of the Bob-white region. Occasional hunters reported a few days of excellent shooting. The junior writer on 5 days, usually with hunting parties, estimated the number of Bob-whites at one-half to three-fourths those of 1939



WINTER COVER AND FOOD ON DECATUR-WAYNE COUNTY EXPERIMENTAL BOB-WHITE MANAGEMENT AREA, 1940.

A. Denser woods with weeds near Steel Creek; B. Sorghum food patch and fence row thickets with adjacent grassy areas on high ground; C. Fence row thicket and unhusked corn.

on the same tracts in several southeast counties. Such numbers were sufficient to warrant an open season, although had the weather been more favorable the bags would not have been filled as easily and quickly as in 1939. But the sport would have been very satisfactory.

The winter of 1940-'41 was open and with little sleet, ice and snow in the quail region. Protective cover and food conditions were very good for the medium population, and farmers on the Decatur-Wayne County area reported no discernible winter loss of Bob-whites. The 1941 seedstock as reported by the farmers and checked by the writers on portions of the area numbered higher than in the spring, 1940. Observers in all parts of the quail region, who were much alarmed at not finding the birds readily in the hunting season in the spring, 1941, reported that the quail "had come back". Those observers meant that they were seeing the Bob-whites in larger numbers, and that there was a good seedstock.

LITERATURE CITED

- Reed, C. D.
1940. Climatological data. U. S. Dept. of Commerce, Weather Bureau, Iowa Section. 51:87-106.
- Sanders, Earl
1940. History and Development of an Experimental Bob-white Management Area in Southern Iowa. Iowa State College Jour. Sci., 15:98-100.

NOTES ON WINTER-KILLING OF CENTRAL IOWA BOB-WHITES¹

By PAUL L. ERRINGTON²

Despite all that has been written on the subject of winter-killing of Bob-whites (*Colinus virginianus*) in north-central United States, the literature gives few details as to just what happens when a covey meets with lethal crisis. Details in most cases are simply not to be had, so the history of mortality suffered in January, 1940, by three coveys northwest of Ames, Iowa, may perhaps be of unusual interest.

All three coveys were made up of birds that fed regularly in cornfields. Cornfields may furnish excellent winter feeding for central Iowa Bob-whites, but the harvest by man and livestock had been in many places very clean during the prolonged, dry "Indian summer" of 1939. The ground was more or less covered with snow throughout the following January, often to the extent of making unavailable what little food remained in fields frequented by the birds. Then, on the night of January 17, the air temperature fell to 25° below zero (F.).

Field studies were conducted according to techniques evolved in the course of previous winters and described elsewhere (Errington, 1933: 6-11; Errington and Hamerstrom, 1936: 317-333). Working conditions were exceptionally favorable.

By December 27, six of a former covey of 17 were living by themselves near a farm yard and a field of soy beans, and the others were remaining in cornfield quarters that had been occupied earlier by the entire number. It could be perceived by January 15 that the cornfield birds were weakening, and, on the night of January 17, the covey of 11 went to roost in a roadside ditch, huddling in typical formation

¹Journal Paper No. J-797 of the Iowa Agricultural Experiment Station. Project No. 495.

²Iowa State College in cooperation with the U. S. Biological Survey, the American Wildlife Institute and the Iowa State Conservation Commission.

under a log. Crowded up into the angle formed by the log and the ditch bank, four birds succumbed. After daybreak, January 18, the living left the roost to travel along a brushy fencerow bordering the ditch. Four more died enroute in different places in this fencerow brush. One of two still alive in the fencerow by early afternoon was weak enough to be readily caught by hand for a specimen; the other, though weak, escaped capture by hiding in a brush-pile. Another feeble flyer arose from the side of a neighboring but well-fed and vigorous covey of 13 and was not again seen while alive.

Counting the captured specimen, carcasses of nine of the 11 birds came to hand before scavengers had eaten of them. The hand-caught bird, a female, weighed 161 grams or about 80 percent "normal" weight; the dead (four males, four females) averaged 121.6 grams or between 60 percent and 65 percent of their probable full weights.³ All had virtually empty alimentary tracts. Remains corresponding to the other two individuals of the covey were found too late to ascertain their state at time of death.

The six birds that separated from the doomed covey of 11 lived safely by themselves until February 10, thereafter to lose their recognizable identity by merging with an adjoining population group.

In another cornfield, there were 31 birds in coveys of 19 and 12 on December 31. Only the larger covey was in this field the night of January 17 and it had split in two for roosting. Five carcasses were found on the main roost under a canopy of snow and weeds, and four of these were together. Only one dead bird was on the second roost. After leaving their two roosts in the morning, the rest of the covey died scattered along the brushy fencerows bordering two sides of the field. Of 17 carcasses, five intact ones (all of males) averaged 117.6 grams. Shortly before the cold snap, a starving bird had been taken by a Great Horned Owl (*Bubo virginianus*)—which essentially completes our record for the covey of 19.

The covey of 12 ranged into the cornfield at irregular intervals but depended upon a distant patch of soy beans for food. Between January 20 and February 2, it (now down to 11 birds) did much moving both north and south of the cornfield and over an area of nearly 400 acres; from February 16 to 27, what was evidently this covey remained comfortably in the vicinity of a farm yard approximately one and one-half miles from the soy bean patch; with the approach of the breeding season, some of its members began to pair and to remain somewhat apart from the unpaired residuum, which latter consisted of five birds on March 26.

The two instances of drastic cold and hunger losses given so far differ from others recorded for this region in the suddenness and completeness with which the actual mortality took place. The reader may see from published examples that mortalities of 60 to 80 percent frequently result when food supplies are cut off by snow, but the birds generally die over a period of a week or two (Errington, 1933: 18, 21, 27, 28; 1936b: 561). Death or helplessness occurs anywhere from the first week (Errington, 1939: 29; Trautman, Bills, and Wickliff, 1939: 100) to several weeks after the beginning of a food crisis, depending principally upon the weather and upon the degree of deprivation suffered. Except for birds dying in good flesh through exposure to blizzards (Errington, 1933: 14; Scott, 1937; Leopold, 1937: 410-412; Wade, 1938), a progressive increase in susceptibility to cold tends to accompany further loss of weight of individuals reduced to 75 or 80 percent of their full winter weights. The death, during the night of January 17 and the morning of January 18, 1940, of Iowa quail down to 60 to 65 percent of full weight is therefore to be expected (Erring-

³Bob-whites of both sexes die at about the same weights (Errington, 1936a).

ton, 1939: 25-27), although, had it not been for the immediate obstacle to survival imposed by a temperature of 25° below zero, most would doubtless have lived some days longer.

The value of the Bob-white's compact, circular roosting huddle for the conservation of heat has been experimentally demonstrated by Gerstell (1939), who found "That, at least within certain limits, the ability of a covey of quail to withstand low temperatures is directly proportional to the size of that covey". On the two covey roosts where the heaviest mortality occurred during the night of January 17, the huddles had been reformed to the exclusion of the dying members. In one of two instances in which four birds died together, the victims froze side by side as a part of the huddled covey; in the other, their bodies before freezing were jammed into a corner of the roost by the activities of the stronger ones.

More typical of starving Bob-whites was the fate of the third unfortunate covey. On January 1, 1940, 34 birds were massed at the edge of a cornfield. Data for the next couple of weeks are too incomplete to permit reconstruction of the whole story, but, on the afternoon of January 17, when the cold was intensifying, I observed a covey of nine uncomfortable-appearing birds. The evidence indicated that two already had died. Four carcasses were found of birds dying between the night of January 17 and the morning of January 20, of which that of a male recovered from a roost weighed 137 grams. Two of the five birds alive on January 20 were obviously weak. On January 22, there were only four, including a weak one; three days later, this weak one could not be induced to fly but dived instead into a hole in the ground. Two recent carcasses and three live birds were found January 31; by February 10, the three live ones had joined a covey of 11 in a farm yard.

The resulting covey had lost one member from an undetermined cause by February 21; by February 24, 2 birds (a male and a female) were sitting apart from the other 11, perhaps as a mating pair; by March 10, only 10 were found. The covey of 11 apparently was one that had abandoned the original cornfield as the food situation grew worse, to spend most of January about a feeding station maintained by sportsmen, then later to move to the farm yard. An area of about one-half section of land was common wintering range of both starving and better fed coveys, but each habitually used a different side.

The total of 37 carcasses recovered from the three starving coveys represents 80 percent of 46 birds known to have died during the winter on a 4200-acre area under observation and 61 percent of a net decline of 61 (231 to 170, late December to late February). It is true that part of the decline is attributable to birds moving from the area and that some influx likewise occurred; but, aside from these variables, it was to be seen that the January snow and cold made a fairly clean sweep of coveys unfavorably situated with respect to food. Accessibility of grain in farm yards and of soy beans persisting above the snow went far to offset the lack of food in cornfields. Deliberate and conscientious feeding by farmers and sportsmen also did much to mitigate the emergency.

LITERATURE CITED

Errington, Paul L.

- 1933. The Wintering of the Wisconsin Bob-white. *Trans. Wis. Acad. Sci., Arts and Letters*, 28: 1-35.
- 1936a. Sex and Resistance of Bob-whites and Ring-necked Pheasants to Starvation. *Auk*, 53: 78-79.
- 1936b. The Winter of 1934-35 and Iowa Bob-whites. *Amer. Midl. Nat.*, 17: 554-568.
- 1939. The Comparative Ability of the Bob-white and the Ring-

- necked Pheasant to Withstand Cold and Hunger. Wilson Bull., 51: 22-37.
- Errington, Paul L. and F. N. Hamerstrom, Jr.
1936. The Northern Bob-white's Winter Territory. Iowa Agr. Expt. Station Research Bull., 201: 301-443.
- Gerstell, Richard
1939. Certain Mechanics of Winter Quail Losses Revealed by Laboratory Experimentation. Trans. North Amer. Wildlife Conf., 4: 462-467. Amer. Wildlife Institute.
- Leopold, Aldo
1937. The Effect of the Winter of 1935-36 on Wisconsin Quail. Amer. Midl. Nat., 18: 408-416.
- Scott, Thomas G.
1937. Snow-killing of the Bob-white. Wilson Bull., 49: 21-27.
- Trautman, Milton B., William E. Bills, and Edward L. Wickliff
1939. Winter Losses from Starvation and Exposure of Waterfowl and Upland Game Birds in Ohio and Other Northern States. Wilson Bull., 51: 86-104.
- Wade, Douglas E.
1938. Death is Upon Them: The Record of a Weather Killed Bob-white Covey. Bird-Lore, 40: 7-10.

GENERAL NOTES

Caspian Tern in Western Iowa.—In Vol. X of 'Iowa Bird Life' I reported having seen a Caspian Tern (*Hydroprogne caspia imperator*) at Lake Manawa, Pottawattamie County, Iowa, on June 9, 1940. As I have always considered it to be of uncommon occurrence here in the past, the following new records may be of interest. On September 9, 1940, I saw three; on May 20, 1941, I saw seven; on July 1, 1941, I saw one; and on July 5, 1941, I saw five—all at Lake Manawa. DuMont (1933) lists the bird as uncommon, and unrecorded from the western part of the state. The 10 specimens in the Coe College Museum and the six in the University of Iowa collection were all taken in the fall. The birds seen here would be better classed as summer stragglers than fall migrants, as even my latest date of September 9 is more nearly a summer than a fall date.—BRUCE F. STILES, Council Bluffs, Iowa.

A Summer Record of the American Merganser.—On June 23 and July 5, 1941, I saw a male American Merganser (*Mergus merganser americanus*) on Lake Manawa, Pottawattamie County, Iowa. The bird is common in migration and winters regularly, sometimes in flocks of several hundred; but I know of no other summer record for this region. Roberts, in his 'Birds of Minnesota', says: "... there is reason to believe that it once nested in limited numbers as far south as the Iowa line". Wells W. Cooke (1888) stated that it had been found breeding in northern Iowa. While I do not think my record was of a breeding bird, I do think that with the degree of protection now afforded, we need not expect our list of breeding ducks to remain static.—BRUCE F. STILES, Council Bluffs, Iowa.

Correction.—Through inadvertency of authors and editor, the scientific name of the Baldpate in the last issue of 'Iowa Bird Life', p. 26, was given as *Chautelasmus streperus* (which is the name for the Gadwall) instead of *Mareca americana*. Readers will please correct this transposition of scientific names.

Noel J. Williams asks us to correct a line in his note on Swainson's Hawks in the June issue, p. 35 (fourth line from bottom of page) to read that migrant hawks *in flocks* are not common in his locality; migrant hawks are common there, but not in flocks.

Turkey Vulture in Dickinson County.—A Turkey Vulture (*Cathartes aura septentrionalis*) was shot by J. M. Johnson seven miles southwest of Milford on July 1, 1941. The specimen was taken to the Iowa Lakeside Laboratory, where it was made into a skin, and added to the Laboratory collection. So far as known at present this is the first specimen for Dickinson County, although Dr. Mary Roberts says that the species has been seen here previously.—NOEL J. WILLIAMS, Milford, Iowa.

Dog Encounters Pheasant.—One evening in August as I was going after the cows, Mitzie, my year-old cocker spaniel, went over into the cornfield. She started up two cock and two hen Ring-necked Pheasants. About a dozen small pheasants were with them. There was one old pheasant that stayed in the field, and it started after Mitzie. Mitzie stood her ground. The old bird pecked her on the nose. Mitzie howled, and then she really made the dust fly in retreat. Her nose bled for about an hour. Mitzie still has the scar on her nose—as well as a lot more respect for pheasants.—PAUL A. PIERCE, Winthrop, Iowa.

Publications on Iowa Ornithology during 1940.

Baker, Maurice F. Age Classes of Winter Cover Used by the Eastern Bob-white, *Colinus V. Virginianus*, in Southern Iowa; Ia. State Coll. Jour. Sci., Vol. 15, No. 1, 1940, pp. 3-11.

'Bird-Lore'. Christmas bird censuses from Iowa, Vol. 42, No. 1, 1940, supplement pp. 113-115.

Errington, Paul L., and Hamerstrom, Frances and F. N., Jr. The Great Horned Owl and Its Prey in North-Central United States; Ia. State Coll. Research Bull. 277, Sept., 1940, pp. 757-850.

Green, Wyman R. Banding of Chimney Swifts (*Chaptura pelagica*) in the Region of Chattanooga, Tennessee; Bird-Banding, Vol. 11, No. 2, 1940, pp. 37-57 (Iowa record on p. 45).

Haecker, Frederick W. Missouri River Bird Notes for 1939; Nebr. Bird Review, Vol. 8, No. 1, 1940, pp. 16-18. The 1940 Early Spring Migration Along the Missouri River, *ibid.*, No. 2, pp. 83-84.

Horsky, L. O. An Unusual Winter Concentration of Ducks Along the Missouri River; Nebr. Bird Review, Vol. 8, No. 1, 1940, pp. 9-10. 'Iowa Bird Life'. 36 articles referring to Iowa birds in Vol. 10.

Leonard, Leora. Doubly Unusual; Nature Notes, Vol. 7, No. 6, 1940, p. 162.

Low, Jessop B. Production of the Redhead (*Nyroca americana*) in Iowa; Wilson Bull., Vol. 52, No. 3, 1940, pp. 153-164.

McIlhenny, Edward A. An Early Experiment in the Homing Ability of Wildfowl; Bird-Banding, Vol. 11, No. 2, 1940, pp. 58-60 (Iowa record on p. 59).

Sanders, Earl. History and Development of an Experimental Bob-white Management Area in Southern Iowa; Ia. State Coll. Jour. Sci., Vol. 15, No. 1, pp. 98-100.

Scott, Thos. G. The Western Burrowing Owl in Clay County, Iowa, in 1938; Amer. Midl. Nat., Vol. 24, No. 3, 1940, pp. 585-593.

Stephens, T. C. The 1938 Longspur Tragedy in Northwest Iowa; Proc. Ia. Acad. Sci., Vol. 46, 1939, pp. 383-395 (issued in 1940).

Struthers, James A. and Dana. Duck Hawks of the Mississippi River Bluffs; The Flicker, Vol. 12, No. 3, 1940, pp. 32-33 (references to Lansing, Iowa, area).

Swenk, Myron H. Distribution and Migration of the Chat in Nebraska and other Missouri Valley States; Nebr. Bird Review, Vol. 8, No. 1, pp. 33-44 (Iowa records on p. 38).

(The above titles are taken from the Pierce bibliography. An effort is made to have the list as complete as possible, but some publications are not seen by the compiler. Bibliographical information in regard to Iowa articles in obscure publications will be much appreciated, and will be used in future lists.)

—F. J. P.

RECENT BIRD BOOKS

A BEHAVIOR STUDY OF THE COMMON TERN, by Ralph S. Palmer (Boston Society of Natural History, Boston, 1941; wrappers, pp. 1-119, with 14 plates of line drawings; price, \$1).

This monographic paper on the Common Tern is based on studies conducted at Sugarloaf Islands, off the coast of Maine. Completeness for the treatise is not claimed, as it does not cover taxonomy, parasites or molts, and only briefly outlines migration and breeding ranges. The work has been undertaken from the angle of behavior, with observations made during the summer months.

The author first visited the islands in 1935, when the tern population was nearing its maximum density. In 1938 and 1939 it was estimated that the islands had 800 pairs of nesting terns, of which about 80 pairs were Roseate Terns and the remainder Common Terns. The Sugarloaf Islands are hardly worthy of the name of island as they are in reality fairly small rocks which rise out of the ocean. Access is rather difficult even in a calm sea, which probably explains the success of the tern colony.

The book is divided into two parts: 'Environment in the Breeding Season' and 'Behavior During the Breeding Cycle'. In the environmental studies the requirements for a tern colony are discussed, with the relation of locality, food, vegetation, weather, water, predators and other factors considered in turn. Because of various decimating influences, the author figures that not over 35 percent of the young terns hatched survive until winter. Common Terns do not reach breeding age until they are three years old. Only 5 percent of the young reach maturity. The behavior studies during the breeding season are very complete and cover courtship, territorial rights, nests, eggs, incubation, young and their development, fishing, bathing and final departure from their summer home. Young terns fly at an average age of 30 days. Terns leave the ternery in small flocks and pass the winter from tropical countries to as far south as the antarctic regions. The book is an excellent study of a well-distributed species. There is a good bibliography and several charts.—F. J. P.

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A FIELD GUIDE TO WESTERN BIRDS, by Roger Tory Peterson (Houghton Mifflin Co., Boston, 1941; cloth, i-xx+1-240, with six colored and 40 halftone plates, 42 line drawings; price, \$2.75).

Our members who have taken western trips in the past and have been puzzled to know what bird book to take along for easy reference, will be glad to learn that a new guide to western birds by Mr. Peterson is available. In a few years his 'Field Guide' to eastern birds has become indispensable. He now does for western birds what he did for the eastern birds.

The plan of the new book is essentially the same as that followed in the eastern guide. There are diagrammatic drawings which show the birds as they would appear in the field when seen at a distance, with various species in each family grouped for comparison, and with all distinctive field marks pointed out. Where color is the predominating feature the respective birds are depicted on colored plates; the others are in black and white. The eastern guide covered the birds of eastern United States to the western edge of the Great Plains. The new western guide covers the remaining United States, beginning where the other left off. It includes the Rocky Mountain States, the Pacific States, the Pacific Northwest and the Southwest. Some overlapping is inevitable, but the author has been very careful to give full coverage to all species occurring in both sections of the United States. Considering the large number of species which had to be crowded into a pocket-size volume, the written text supplementing the plates is clear though concise and is all that anyone might ask for. The arrangement

s similar to the eastern book, with notes on size, color, range, and seasonal plumages; certain characteristics of voice, behavior, flight and other details not transferable to plate illustration are also described. The typography is excellent, with sufficient use of bold-face type for species names and sub-heads to insure easy reference as the reader skims the pages. There is a list of books for reference and a full index.

The problem of subspecies, particularly complex in the western states, is well handled by the author. Where the subspecies is identifiable in the field, it is given full treatment in the body of the book. Where its validity as a subspecies rests on minute characters which can be noted only by a specimen in the hand of an expert, it is listed in a special section in the back of the book; in this section the various subspecific forms are listed under the species name with the geographical range given for each. To many of us in the non-professional class it seems that subspecies are often given undue prominence. Some bird journals name every bird with a trinomial whether that particular subspecies can be identified in the field or not. It is our editorial opinion that subspecies have but small place in field ornithology, because so few of them can be definitely identified in the field. It seems foolish to presume that a bird is a certain subspecies merely because it is found within the geographical limits of the range of that subspecies. Mr. Peterson's handling of this matter seems to us to be very sane and appropriate.—F. J. P.

TRAIL OF AN ARTIST-NATURALIST: The Autobiography of Ernest Thompson Seton (Charles Scribner's Sons, New York City, 1941; cloth, pp. i-xii+1-412, with 31 halftone plates and numerous sketches; price, \$3.75).

For many years the reviewer has felt that he owes a debt of gratitude to Ernest Thompson Seton. It was his book, 'Two Little Savages', that kindled my interest in birds and nature and furnished the original incentive for an avocation that has been followed a quarter-century and has furnished me with countless hours of pleasure. Perhaps this interest would have been aroused in some other way; but the fact remains that 'Two Little Savages' is one of the best books for boys ever written, and doubtless Mr. Seton deserves all the credit. A copy of 'Two Little Savages' received by me as a Christmas gift in 1915 was read with avidity, and soon a tribe of "Blazing Arrow Indians" was organized among the boys of the neighborhood, while a study of birds and many of the other activities of the boy characters in the book followed in due course. Dr. Roberts, former President of the Iowa Ornithologists' Union, also received his inspiration to study birds from reading 'Two Little Savages' in boyhood. How many other boys have been thus influenced during the long career of this one book by Seton can only be conjectured, but the total is no doubt a large one.

Mr. Seton is now 81 years old, and this autobiography rounds out a long series of nature books the first of which appeared in 1898. His life span has been filled with experiences of great variety. He had adventures with wild creatures in many places in North America, and these in a day when the country was an unsettled wilderness with wild life at the peak of its abundance. A master narrator and descriptive writer, Mr. Seton uses a deft hand and his story moves along swiftly without a dull page in the entire large book.

He was born in England in 1860, the twelfth of a family of 14 children. In 1866 the family moved to Canada, settling on a farm in Ontario. After four years on a farm beside the big woods, they moved to Toronto where young Seton's education in a rough city school became turbulent but interesting. His contact with nature at this period was gained with difficulty, but his urge to study wild life was so firmly fixed it could not be thwarted. Many of his early experiences are the same as those he gave to Yan in 'Two Little Savages'—the daily passing of

the taxidermist's shop, buying the bird book, visits to a woodland retreat where he built a hut which was later defiled by tramps. These and other incidents we now learn were autobiographical in the former story. A frail body and ill health handicapped him greatly in youth, and poverty was a further barrier in the path to success. However, young Seton was possessed of unusual talents and mental ability, which made his progress steady. At last he surmounted all obstacles and in maturity achieved the success and fame toward which he had set his course early in life. It is an inspiring story.

Manitoba and the Canadian Northwest 60 years ago furnished a fruitful field for the author's nature studies. He saw the region in its virgin opulence; later, with the passing decades he watched the wild life slowly disappear—due to settlement and the drying up of the country. Birds, a first love, were a major interest through life and are given a prominent place in the book. There are hunting anecdotes aplenty—moose hunts, wolf hunts, and encounters with Indians and frontier desperadoes. Even his several journeys to London and Paris to study art were not without exciting adventures. In later life he became a wealthy man with ample opportunity to do the things he wished. At this time he says, "For long my theory of life has been to take two trips into the wilderness each year and spend six months on each trip".

Mr. Seton was an exacting journalist all his life. He thus had at his elbow an abundant source of material to use in his writing. He describes his record-books: "... the Journal of my Travels and Doings is on my desk before me—fifty fat leather-clad volumes, most of them over-fat, and still increasing. Scribbled in pencil, ink, water color, anything; smirched with the blood of victims sacrificed on the altar of the knowledge-hunger; burned with sparks of the campfire; greasy with handling by unwashed, hasty, eager hands; badly written; at times badly illustrated with hasty sketches—hasty but meaningful. A bookseller would not give a dime for the lot, and I would not part with them for a double million. They represent more than anything else those sixty years of my life and thought, my strivings and my joy."—F. J. P.

MEMBERSHIP NEWS

Most of the June, 1941, issue of 'Nature Notes' (Peoria, Illinois) is occupied with an article on 'Field Identification Iowa Mammals', by Thomas G. Scott, one of our well known Iowa writers and naturalists. The article is full of information and is well illustrated.

As usual at this season of the year, our information on the vacations of our members is very meager, and we can give only a partial report. We report quite belatedly that Mrs. Janet DuMont spent the past winter at San Antonio, Texas, and returned to her home at Des Moines in late April. Mr. and Mrs. Ross J. Thornburg, of Des Moines, have left on a tour of the West and expect to be away a year or two. They are ardent bird students and will no doubt find many new and interesting birds in the western states. Mr. and Mrs. Wm. Buzby, of Boone, enjoyed a trip to California and the West during late June and July. Among Ames vacationists were Dr. and Mrs. Paul Errington, who spent the summer on a ranch in Montana, and Dr. and Mrs. George Hendrickson, who visited their daughter at Washington, D. C. Leaving Washington the Hendricksons visited Philadelphia, New York City, Albany, Niagara Falls, Cleveland and Chicago. Rev. M. C. Melcher and family, Central City, visited Columbus, Ohio, during August. Dr. and Mrs. T. C. Stephens spent a part of the summer at the Lakeside Laboratory, Milford, Iowa. Mr. and Mrs. Howard Lambert, of Hampton, visited Salt Lake City and other points in the West during August.

Mr. and Mrs. Wm. Youngworth, of Sioux City, drove to Rocky Mountain and Yellowstone National Parks in August. From Yellowstone they went to Sun Valley, Idaho, and drove down the canyon of the Salmon River. They reported large numbers of Sage Hens on the roads of the West, but that mortality from autos was great. They slowed down and stopped many times to keep from killing five or six at a time, and said they saw almost as many dead as live ones on the highways.

The Editor was somewhat disappointed in the make-up of this issue. He had hoped for more items for the General Notes section. A book review scheduled for the December issue is included in the present issue, and there are other shifts in order to fill out the space. Interest in summer bird life in Iowa seems to be at a rather low ebb, but it is perhaps due to the European war, National Defense, and other distractions with which we must contend this year. Send us your summer observations for the General Notes section in the next issue.

MEMBERSHIP ROLL OF THE IOWA ORNITHOLOGISTS' UNION*

CHARTER MEMBERS (1923)

Bailey, Mrs. Mary L., Sioux City	Palas, Arthur J., Postville
Banning, R. H., Cresco	Pierce, Fred J., Winthrop
Battell, Mrs. F. L., Ames	Rosene, Walter M., Ogden
Bennett, Walter W., Los Angeles, Calif.	Sherman, Miss Althea R., National
Hall, Fred H., Ottumwa	Stephens, Dr. T. C., Sioux City
Holck, J. H., Spirit Lake	Trewin, Mrs. C. B., Dubuque
Kinnaird, Mrs. W. A., West Des Moines	Wendelburg, Mrs. Toni R., Des Moines
Mills, Wier R., Pierson	Wolden, B. O., Estherville

MEMBERS

Adams, I. C., Jr., Columbia, Mo., 1941	Bennett, Dr. Logan J., State College, Pa., 1934
Allert, Oscar P., McGregor, 1929	Bent, Arthur C., Taunton, Mass., 1931
Austin, Dr. O. L., Tuckahoe N. Y., 1931	Bickel, Mrs. W. E., Vinton, 1940
Ayers, Charles C., Jr., Ottumwa, 1941	Biel, Miss Stella, Vinton, 1938
Baker, Walter, Ottumwa, 1939	Binsfeld, Mrs. A. J., Des Moines, 1939
Bartlett, Wesley H., Primghar, '35	Birkeland, Henry, Roland, 1933
Becker, Miss Hilda, Davenport, '26	Bishop, Dr. Louis B., Pasadena, Calif., 1934
Beckwith, Miss Alma, Atlantic, '39	

*Complete to August 10, 1941. Year of joining the Union follows the name of each member. All cities are within Iowa unless otherwise noted. Corrections in the list will be appreciated.

DISTRIBUTION IN IOWA BY COUNTIES

Allamakee, 2	Dallas, 1	Howard, 1	Page, 1
Benton, 34	Davis, 1	Jasper, 1	Polk, 10
Black Hawk, 16	Des Moines, 6	Jefferson, 2	Pottawattamie, 2
Boone, 3	Dickinson, 5	Johnson, 1	Poweshiek, 1
Bremer, 2	Dubuque, 14	Keokuk, 1	Scott, 5
Buchanan, 2	Emmet, 3	Lee, 1	Sioux, 1
Carroll, 1	Fayette, 1	Linn, 14	Story, 8
Cass, 4	Floyd, 1	Lyon, 2	Tama, 2
Cerro Gordo, 1	Franklin, 1	Madison, 1	Wapello, 3
Chickasaw, 1	Grundy, 1	Marshall, 2	Webster, 2
Clayton, 3	Hamilton, 1	Monona, 1	Woodbury, 7
Crawford, 1	Hardin, 1	O'Brien, 2	
Iowa total, 177			
Outside of Iowa, 36			
Grand total, 213			

- Bliese, John, Cedar Falls, 1935
 Blosser, Mrs. Noah J., Patterson, 1927
 Bordner, Mrs. Frances, Iowa City, 1929
 Bosma, Rev. D. E., Baxter, 1934
 Boyd, Ivan, Floris, 1937
 Bradke, John, Jr., Vinton, 1940
 Burk, Walter L., Vinton, 1931
 Buzby, Mr. and Mrs. Wm., Boone, 1932 and 1929
 Carnegie-Stout Public Library, Dubuque, 1931
 Chadbourne, Dr. T. L., Vinton, '38
 Clark, Mrs. Ella L., Burlington, '25
 Copp, Miss C. Esther, Cedar Rapids, 1933
 Crabb, Wilfred D., Ames, 1937
 Cummings, Frank, Vinton, 1938
 Currier, Ed. S., Portland, Ore., '34
 Dales, Mrs. Marie, Sioux City, '29
 Davis, Roy H., Vinton, 1938
 DeLong, Mrs. W. C., Sigourney, '39
 Dille, Fred M., Nogales, Ariz., '40
 Dix, Mrs. Ray S., Cedar Falls, '35
 Dole, J. Wilbur, Fairfield, 1929
 Dowden, Dr. E. H., Vinton, 1938
 Downing, Glenn R., McGregor, '38
 Dragoo, Lavina, Cedar Rapids, '29
 Dubuque Bird Club, Dubuque, '33
 DuMont, Mrs. Janet, Des Moines, 1927
 DuMont, Philip A., Arlington, Va., 1924
 Eastman, Mrs. E. P., Burlington, 1929
 Edgar, Mrs. G. P., Burlington, '39
 Edge, Mrs. C. N., New York, N. Y., 1931
 Eggleston, Mrs. Jessie, Vinton, '40
 Eiler, Mrs. Burness W., Cedar Falls, 1940
 Ellis, Ralph, Jr., Berkeley, Calif., 1933
 Emigh, A. A., Atlantic, 1941
 Errington, Dr. Paul L., Ames, '32
 Faulkner, Geo. O., Waterloo, 1931
 Ficke, Mrs. C. A., Davenport, 1929
 Flodin, Mrs. C. C., Cedar Rapids, 1931
 Floyd, Miss Jean, Vinton, 1940
 Fox, Miss Beverly, Sumner, 1941
 Frankel, Mrs. Henry, Des Moines, 1925
 Franklin, J. B., Vinton, 1938
 Funk, Miss Ruth F., Independence, 1940
 Ganier, Albert F., Nashville, Tenn., 1931
 Gavalas, Nick, Vinton, 1938
 Graesing, Howard, Spirit Lake, '39
 Grant, Dr. Martin L., Cedar Falls, 1937
 Guion, Geo. Seth, New Orleans, La., 1933
 Guthrie, Richard A., Woodward, 1939
 Haecker, Frederick W., Omaha, Nebr., 1941
 Hallowell, Miss Loraine, Waterloo, 1932
 Ham, Miss Edith D., Dyersville, '39
 Hanson, Mrs. Ernest W., Burlington, 1936
 Hantelmann, Salina, Waterloo, '40
 Hathorn, Glen M., Flint, Mich., '34
 Hays, R. M., Waterloo, 1939
 Hays, Weldon, Vinton, 1940
 Heike, Rev. R., Jr., Rutland, Ill., 1940
 Hemsley, Ethan A., Dubuque, '36
 Hendrickson, Dr. and Mrs. Geo. O., Ames, 1931 and 1933
 Herrmann, Henry, Dubuque, 1939
 Heuer, Ralph, Davenport, 1940
 Heuser, E. P., Dubuque, 1940
 Hicks, Dr. Lawrence E., Columbus, Ohio, 1938
 Hilton, Clarence, Vinton, 1940
 Hite, Charles, Vinton, 1938
 Hoskinson, Mrs. Helen H., Clarinda, 1940
 Iowa State Traveling Library, Des Moines, 1940
 Jefferies, James, Vinton, 1938
 Jenson, Mrs. A. R., Clarks Grove, Minn., 1934
 Johnson, Clifford O., Dubuque, '41
 Johnson, J. F., Vinton, 1940
 Johnson, Mrs. Martin A., Union, '41
 Johnson, Mr. and Mrs. R. W., Dubuque, 1939 and 1927
 Johnson, W. A., Grinnell, 1940
 Jones, Miss Dorothy, Kansas City, Mo., 1934
 Jones, Glenn, Atlantic, 1940
 Jones, Myrle L., Toledo, 1931
 Kaiser, Dale, Vinton, 1940
 Keck, Dr. Warren N., Cedar Rapids, 1936
 Kellogg, Mrs. Cora W., Vinton, '38
 Kendall Young Library, Webster City, 1931
 Kent, Mrs. Wm., Cedar Rapids, '32
 King, Mrs. Helen G., Grundy Center, 1933
 Klinker, Mrs. P. J., Denison, 1937
 Knapp, George R., Vinton, 1940
 Knoop, Miss Pearl, Marble Rock, 1937
 Kohlman, Miss Margaret, Dubuque, 1937

- Kruse, M. P., Vinton, 1938
 Kubichek, Wesley F., Arlington, Va., 1941
 Laffoon, Jean, Sioux City, 1940
 LaForce, Mrs. Edith F., Burlington, 1939
 LaGrange, Bob, Vinton, 1938
 Lambert, Mrs. Howard T., Hampton, 1940
 Library, Iowa State Teachers College, Cedar Falls, 1939
 Library, U. S. Dept. of Agriculture, Washington, D. C., 1931
 Lincoln High School, Vinton, 1938
 Loban, Miss Myra E., Waterloo, '38
 Loban, Miss R. Lucile, Waterloo, 1938
 Ludeman, Mrs. Geo. R., Mason City, 1939
 MacMartin, Mrs. W. G., Tama, '32
 Maillie, Mrs. Alice E., Oelwein, '41
 McCabe, Miss Olivia, Des Moines, 1932
 McDonald, Malcolm, Fairfield, '35
 McDonald, Miss Mary H., Dubuque, 1937
 McGill University Library, Montreal, Que., 1932
 Melcher, Rev. M. C., Central City, 1939
 Meltvedt, Burton W., Paullina, '31
 Miller, Hilda E., Rock Valley, '40
 Moeran, E. H., Yonkers, N. Y., '40
 Moorman, Robert, Ames, 1941
 Morrissey, Thos. J., Davenport, '40
 Moser, Dr. R. Allyn, Omaha, Nebr., 1941
 Mote, Mr. and Mrs. G. A., Marshalltown, 1929
 Murley, Miss Margaret, Sumner, 1937
 Myers, Mrs. Len, Waterloo, 1939
 Nichols, Charles, Vinton, 1940
 Nichols, Harvey L., Waterloo, '29
 Oberholser, Dr. H. C., Washington, D. C., 1932
 Orr, Ellison, Waukon, 1935
 Osher, Mrs. J. B., Estherville, '39
 Peasley, Mrs. H. R., Des Moines, 1934
 Peel, Clarence O., Davton, 1941
 Petranek, Mr. and Mrs. E. J., Cedar Rapids, 1931
 Pettingill, Dr. O. S., Northfield, Minn., 1937
 Pierce, Robert A., Nashua, 1941
 Pike, Mrs. Walter, Coggon, 1936
 Pollock, George, Vinton, 1938
 Port, Glenn A., Vinton, 1938
 Price, C. W., Spirit Lake, 1939
 Public Library, Cedar Rapids, '31
 Public Library, Council Bluffs, '31
 Public Library, Des Moines, 1931
 Public Library, Fort Dodge, 1936
 Public Library, Onawa, 1931
 Public Library, Sioux City, 1931
 Public Library, Vinton, 1938
 Rich, Dr. Guy C., Hollywood, Calif., 1931
 Roberts, Dr. and Mrs. F. L. R., Spirit Lake, 1924 and 1926
 Roberts, Dr. T. S., Minneapolis, Minn., 1931
 Ross, Hollis T., Lewisburg, Pa., '40
 Ruhr, Eugene, Atlantic, 1941
 Sanders, Earl, Yuma, Ariz., 1940
 Schramm, Frank H., Burlington, 1934
 Schuster, Miss Ival M., Dubuque, 1941
 Scott, John F., Vinton, 1940
 Scott, Thomas G., Ames, 1937
 Serbousek, Miss Lillian, Cedar Rapids, 1931
 Sherwood, Jack W., Salinas, Calif., 1936
 Smouse, C. D., Vinton, 1939
 Spicher, Elmer, Vinton, 1938
 Stiles, Bruce F., Council Bluffs, '37
 Stoner, Dr. Dayton, Albany, N. Y., 1937
 Struck, Dr. K. H., Davenport, '29
 Sutton, Dr. George M., Ithaca, N. Y., 1941
 Taylor, Mrs. H. J., Berkeley, Calif., 1939
 Thomas, Mr. and Mrs. O. S., Rock Rapids, 1929
 Thornburg, Mrs. Ross J., Des Moines, 1937
 Tobin, Hamilton, Vinton, 1940
 Tobin, John, Vinton, 1938
 Tobin, Louis P., Vinton, 1938
 Tonkin, George, Boston, Mass., '38
 Vane, Dr. Robt. F., Cedar Rapids, 1940
 Weber, Alois John, Keokuk, 1929
 Wilharm, Wanda M., Waterloo, '38
 Willer, Herb, Vinton, 1938
 Willis, Miss Myra G., Cedar Rapids, 1940
 Winter, Miss Ella June, Carroll, '24
 Wolden, Mrs. B. O., Estherville, '39
 Woodhouse, R. F., Cedar Rapids, 1938
 Wyth, J. G., Cedar Falls, 1932
 Young, Miss Katharine, Waterloo, 1940
 Young, Miss Mary H., Dubuque, 1940
 Youngs, Miss Sarah, Meadville, Mo., 1938
 Youngworth, Wm., Sioux City, '26